No. 609,388. Patented Aug. 16, 1898.

W. C. FLINT.

WRENCH.

(Application filed Dec. 16, 1897.)

(No Model.)

Fig. 1

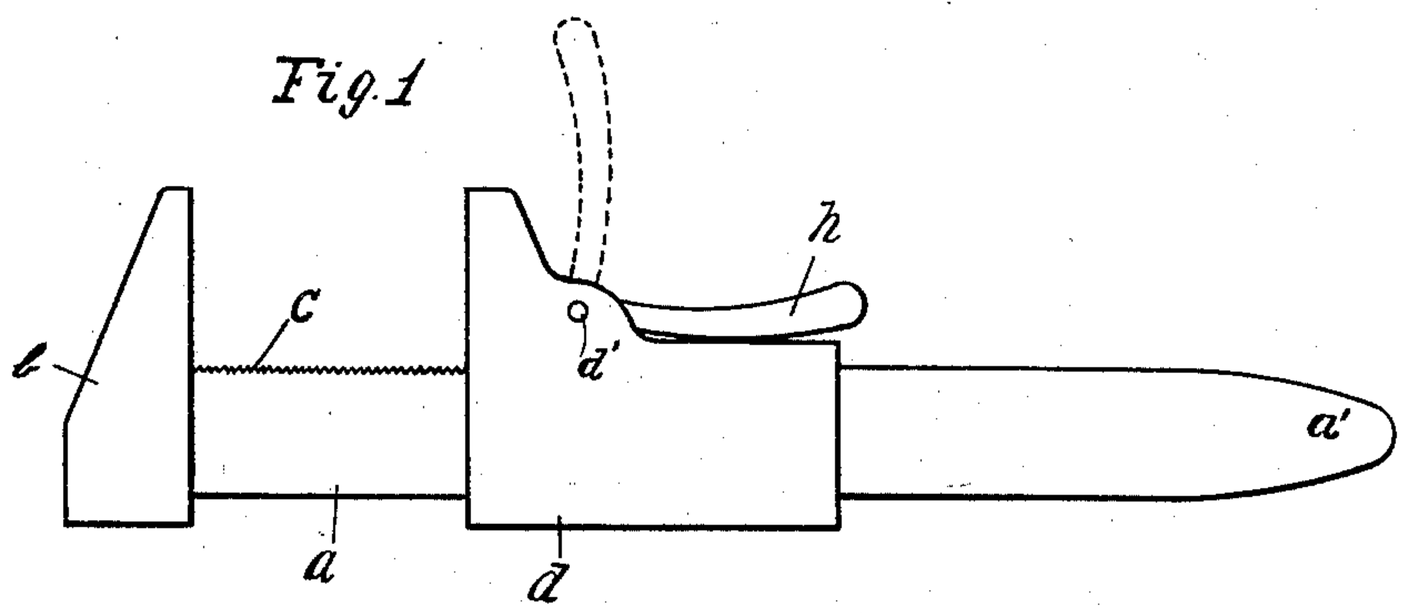


Fig. 2

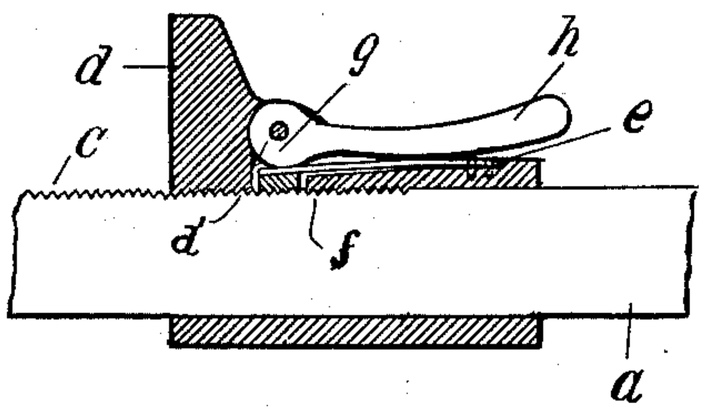
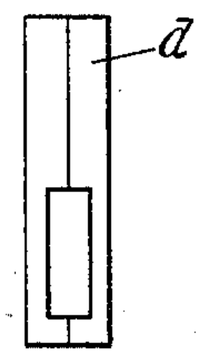


Fig. 3



Witnesses
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WRENCH.

SPECIFICATION forming part of Letters Patent No. 609,388, dated August 16, 1898.

Application filed December 16, 1897. Serial No. 662,156. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. FLINT, a citizen of the United States of America, residing at Glastonbury, in the county of Hartford and State of Connecticut, have invented a certain new and useful Improvement in Wrenches, of which the following is a description, reference being had to the accompanying drawings, wherein—

Figure 1 is a side view. Fig. 2 is a view of the same parts shown in Fig. 1, but with the movable jaw cut in central lengthwise section on a plane parallel to one of its sides. Fig. 3 is a top view of the movable jaw.

The object of the improvement is the production of a wrench having the very simplest and most inexpensive features of construction and possessing improved points of operation, as hereinafter described and claimed.

In the accompanying drawings the letter *a* denotes the wrench-bar, carrying the head *b* at one end and serrations *c* in one edge, while its opposite end *a'* is preferably reduced. The letter *d* denotes the movable jaw, encompassing the wrench-bar and adapted to move thereon longitudinally when permitted, and this jaw can obviously be removed off the reduced end *a'* of the bar. Said jaw is made of two like and corresponding parts, as seen in Fig. 3, duly united by a rivet *d'* or the like, a feature of construction which enables the socket for the spring and cam to be cheaply and easily formed therein.

The letter *e* denotes a spring fastened to the top of the movable jaw near its lower end and projecting toward the head of the wrench, its body being seated meanwhile in a suitable mortise made for it in the movable jaw. This spring bears on the under side of its free end the buffer *f*, preferably having a serrated face adapted to make contact through a suitable opening in the jaw with the serrations on the wrench-bar when the parts are in position to clamp the movable jaw to the wrench-jaw; but at other times the spring pulls this buffer away from contact with said serrations.

The letter *g* denotes a cam or eccentric pivotally hung on the rivet *d'* in the upper part of the movable jaw. From this cam extends a lever *h*, which projects downward over the movable jaw and rests upon the body of the spring when the parts are in position to clamp the jaw to the wrench-bar, and the length of this lever is such as to cause its outer end to project below the lower end of the movable jaw, to the end that it may be readily reached to be operated by one's thumb or finger. When the movable jaw is unclamped from the wrench-bar, this lever is in the position denoted by dotted lines in Fig. 1. It is by manipulating this lever and the resultant manipulation of the cam *g* that the movable jaw is clamped to or unclamped from the wrench-bar.

The fastening of the spring to the lower part of the movable jaw and projecting it therefrom upward, together with the pivoting of the cam in the upper part of the movable jaw, are essential features of this construction in order to get a length of lever which enables the operator to have sufficient power to loosen the cam at all times, and the extension of the tip of the lever beyond the jaw assists by presenting its end in position to be raised by the thumb or finger. The fact that the lever bears upon the back of the spring is also important, because it assists in holding the spring and preventing it from forcibly turning the cam and releasing the jaw from the wrench-bar, as would be likely to happen in some cases under great strain; but possibly the most important feature of construction herein is the fact that the movable jaw is made in two members or halves, as seen in Fig. 3, connected by but a single rivet *d'*, and this rivet forms the pivot of the cam and lever. It will be clear that the halves of the jaw can be cast very cheaply with a proper interior configuration and the parts assembled and riveted together at little cost. The reduced end *a'* of the bar *a* permits the jaw to be passed on afterward.

What is claimed as new is—

As an improved article of manufacture, the herein-described wrench, the same comprising a bar having a head or fixed jaw at one end, serrations along one edge, and its opposite end reduced; a movable jaw consisting of complementary halves united by a single rivet above the bar-opening and itself having an aperture into said opening; a spring secured at one extremity to the upper side of the jaw near its lower end and carrying at its other extremity a serrated buffer standing

within said aperture and adapted to engage the serrations on the bar, an eccentric cam pivotally mounted on said rivet behind the upper end of the spring, and a lever projecting from said cam and of such shape and length that when the serrations are engaged the body of the lever rests on the back of the spring and the lower end of the lever projects below the lower end of the jaw, all substantially as described and for the purpose set forth.

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